



## Complete Summary

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### **GUIDELINE TITLE**

Forearm, wrist and hand complaints.

### **BIBLIOGRAPHIC SOURCE(S)**

Forearm, wrist, and hand complaints. Elk Grove Village (IL): American College of Occupational and Environmental Medicine (ACOEM); 2004. 34 p. [101 references]

### **GUIDELINE STATUS**

This is the current release of the guideline.

This guideline updates a previous version: Harris, J, ed. Occupational Medicine Practice Guidelines: American College of Occupational and Environmental Medicine. Beverly Farms, MA: OEM Press; 1997.

### **\*\* REGULATORY ALERT \*\***

### **FDA WARNING/REGULATORY ALERT**

**Note from the National Guideline Clearinghouse:** This guideline references a drug(s) for which important revised regulatory information has been released.

- [June 15, 2005, Non-Steroidal Anti-Inflammatory Drugs \(NSAIDs\)](#): U.S. Food and Drug Administration (FDA) recommended proposed labeling for both the prescription and over the counter (OTC) NSAIDs and a medication guide for the entire class of prescription products.
- [April 7, 2005, Non-steroidal anti-inflammatory drugs \(NSAIDs\) \(prescription and OTC, including ibuprofen and naproxen\)](#): FDA asked manufacturers of prescription and non-prescription (OTC) non-steroidal anti-inflammatory drugs (NSAIDs) to revise their labeling to include more specific information about potential gastrointestinal (GI) and cardiovascular (CV) risks.

### **COMPLETE SUMMARY CONTENT**

**\*\* REGULATORY ALERT \*\***

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

## SCOPE

### **DISEASE/CONDITION(S)**

Forearm, wrist, and hand complaints

### **GUIDELINE CATEGORY**

Diagnosis  
Evaluation  
Management  
Treatment

### **CLINICAL SPECIALTY**

Family Practice  
Internal Medicine  
Orthopedic Surgery  
Physical Medicine and Rehabilitation  
Preventive Medicine  
Surgery

### **INTENDED USERS**

Advanced Practice Nurses  
Physician Assistants  
Physicians  
Utilization Management

### **GUIDELINE OBJECTIVE(S)**

- To provide information and guidance on generally accepted elements of quality care in occupational and environmental medicine
- To improve the efficiency with which the diagnostic process is conducted, the specificity of each diagnostic test performed, and the effectiveness of each treatment in relieving symptoms and achieving cure
- To present recommendations on assessing and treating adults with work-related forearm, wrist, or hand complaints

### **TARGET POPULATION**

Adults with potentially work-related forearm, wrist, or hand complaints seen in primary care settings

### **INTERVENTIONS AND PRACTICES CONSIDERED**

*Note from the National Guideline Clearinghouse (NGC):* The following general clinical measures were considered. Refer to the original guideline document for information regarding which specific interventions and practices under these general headings are recommended, optional, or not recommended by the American College of Occupational and Environmental Medicine.

1. History and physical exam
2. Patient education
3. Medication
4. Physical treatment methods
5. Injections
6. Rest and immobilization
7. Activity and exercise
8. Detection of neurologic abnormalities
9. Radiography
10. Other imaging procedures
11. Surgical considerations
12. Psychosocial factors

## **MAJOR OUTCOMES CONSIDERED**

Missed work days

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

*Note from the National Guideline Clearinghouse (NGC):* The American College of Occupational and Environmental Medicine contracted the Work Loss Data Institute to provide medical library research services.

#### **Disability-Duration Data**

This edition includes disability-duration data that have been extracted from National Health Interview Survey data. Only data from interviews with individuals without workers' compensation claims has been included.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Expert Consensus  
Weighting According to a Rating Scheme (Scheme Given)

## **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

A = Strong research-based evidence (multiple relevant, high-quality scientific studies).

B = Moderate research-based evidence (one relevant, high-quality scientific study or multiple adequate scientific studies).

C = Limited research-based evidence (at least one adequate scientific study of patients with forearm, wrist, or hand disorders).

D = Reviewer or consensus interpretation of evidence not meeting inclusion criteria for research-based evidence.

## **METHODS USED TO ANALYZE THE EVIDENCE**

Review  
Review of Published Meta-Analyses

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Contributors reviewed at least one chapter each and reviewed the relevant medical literature that had been published since the creation of the original Guidelines in 1997.

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Not stated

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

## **COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

## **METHOD OF GUIDELINE VALIDATION**

Internal Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

Following the chapter and literature review, participants provided written or verbal comments to the American College of Occupational and Environmental Medicine's Practice Guidelines Committee.

Verbal comments were in the form of participation in multi-specialty conference calls, during which the issues raised in each chapter were extensively discussed. Draft chapters were prepared and distributed by the American College of Occupational and Environmental Medicine to all chapter reviewers. Follow-up multi-specialty teleconferences were then held as appropriate, during which time the draft was again reviewed.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

Recommendations are followed by evidence classification (A-D) identifying the type of supporting evidence. Definitions for the types of evidence are presented at the end of the "Major Recommendations" field.

**Summary of Recommendations for Evaluating and Managing Forearm, Wrist, and Hand Complaints** (refer to the original guideline document for more detailed information)

Clinical Measure	Recommended	Optional	Not Recommended
History and physical exam	Basic history, focused exam, and search for red flags (C)		
Patient education	Patient education regarding prevention, diagnosis, prognosis, and expectations of medical treatment (D)		
Medication (See Chapter 3 in the original guideline document)	Acetaminophen (C) Non-steroidal anti-inflammatory drugs (NSAIDs) (B)	Opioids, short course (C)  Rarely, corticosteroids (C)	Use of opioids for more than 2 weeks (C)
Physical treatment methods	Instructions for home exercises	At-home applications of heat or cold packs (D)	Passive modalities  Transcutaneous electrical neurostimulation (TENS) units (C)  Biofeedback (D)
Injections	Injection of corticosteroids into carpal tunnel in mild or moderate cases of carpal tunnel syndrome	Initial injection of corticosteroids in moderate cases of tendinitis (D)	Repeated or frequent injection of corticosteroids into carpal tunnel, tendon sheaths, ganglia, etc.

<b>Clinical Measure</b>	<b>Recommended</b>	<b>Optional</b>	<b>Not Recommended</b>
	(CTS) after trial of splinting and medication (C)  Initial injection into tendon sheath for clearly diagnosed cases of DeQuervain's syndrome, tenosynovitis, or trigger finger (D)		(D)
Rest and immobilization	Splinting as first-line conservative treatment for carpal tunnel syndrome, DeQuervain's syndrome, strains, etc. (C)	Prolonged splinting (leads to weakness and stiffness) (D)  Prolonged post-operative splinting (C)	
Activity and exercise	Stretching  Aerobic exercise  Maintaining strength and mobility of all remaining body parts while recovering from wrist problems (C)		Reduced general activities while recovering (D)
Detection of neurologic abnormalities	Nerve conduction velocity (NCV) for median (B) or ulnar (C) impingement at the wrist after failure of conservative treatment		Routine use of NCV or electromyography (EMG) in diagnostic evaluation of nerve entrapment or screening in patients w/o symptoms (D)  Use of vibrometry for screening (C)
Radiography	Plain films for suspected scaphoid fractures, repeat films in 7-10 days (D)	Limited bone scan to detect fractures if clinical suspicion exists (C)	Routine use for evaluation of forearm, wrist, and hand (D)
Other imaging procedures		Use of arthrography, magnetic resonance imaging (MRI), or computed tomography (CT) scans prior to history and physical examination by a qualified specialist	

<b>Clinical Measure</b>	<b>Recommended</b>	<b>Optional</b>	<b>Not Recommended</b>
		(D)	
Surgical considerations	<p>Early surgical intervention for severe carpal tunnel syndrome (CTS) confirmed by NCV may be indicated (B)</p> <p>Tendinitis (DeQuervain's), ganglion, or trigger finger: referral to surgeon only after patient education and conservative treatment, including splinting and injection, have failed (C, D)</p>		
Psychosocial factors	<p>Consider counseling for severe hand injuries (D)</p> <p>Awareness by treating practitioner of interplay between physical, economic, and psychological factors in patients with muscular skeletal disorders (MSDs) (C, D)</p>		

### **Definitions:**

### **Levels of Evidence**

A = Strong research-based evidence (multiple relevant, high-quality scientific studies).

B = Moderate research-based evidence (one relevant, high-quality scientific study or multiple adequate scientific studies).

C = Limited research-based evidence (at least one adequate scientific study of patients with forearm, wrist, or hand disorders).

D = Reviewer or consensus interpretation of evidence not meeting inclusion criteria for research-based evidence.

### **CLINICAL ALGORITHM(S)**

The following clinical algorithms are provided in the original guideline document:

- American College of Occupational and Environmental Medicine Guidelines for care of acute and subacute occupational forearm, wrist, and hand complaints
- Initial evaluation of occupational forearm, wrist, and hand complaints
- Initial and follow-up management of occupational forearm, wrist, and hand complaints
- Evaluation of slow-to-recover patients with occupational forearm, wrist, and hand complaints (symptoms >4 weeks)
- Surgical considerations for patients with anatomic and physiologic evidence of nerve root compression and persistent forearm, wrist, and hand symptoms
- Further management of occupational forearm, wrist, and hand complaints

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

## **BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**

### **POTENTIAL BENEFITS**

- Improved efficiency of the diagnostic process
- Effective treatment resulting in symptom alleviation and cure

### **POTENTIAL HARMS**

Risks and complications of surgical procedures and imaging studies (e.g., infection, radiation)

## **QUALIFYING STATEMENTS**

### **QUALIFYING STATEMENTS**

- The American College of Occupational and Environmental Medicine (ACOEM) provides this segment of guidelines for practitioners and notes that decisions to adopt particular courses of actions must be made by trained practitioners on the basis of the available resources and the particular circumstances presented by the individual patient. Accordingly, the ACOEM disclaims responsibility for any injury or damage resulting from actions taken by practitioners after considering these guidelines.
- The guidelines for modification of work activities and disability duration (see original guideline document) are general guidelines based on consensus or population sources and are never meant to be applied to an individual case without consideration of workplace factors, concurrent disease or other social or medical factors that can affect recovery. The parameters for disability duration are "consensus optimal" targets as determined by a panel of ACOEM members in 1996, and reaffirmed by a panel of ACOEM members in 2002. In



most cases persons with one non-severe extremity injury can return to modified duty immediately. Restrictions should take into consideration the opposite extremity also to prevent strain injuries to the uninjured extremity. Additional limitations of the frequency or pressure of keyboard use or pinch grasp may be warranted.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### IMPLEMENTATION TOOLS

Clinical Algorithm

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better

### IOM DOMAIN

Effectiveness  
Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Forearm, wrist, and hand complaints. Elk Grove Village (IL): American College of Occupational and Environmental Medicine (ACOEM); 2004. 34 p. [101 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

1997 (revised 2004)

### GUIDELINE DEVELOPER(S)

American College of Occupational and Environmental Medicine - Medical Specialty Society

## **SOURCE(S) OF FUNDING**

American College of Occupational and Environmental Medicine

## **GUIDELINE COMMITTEE**

American College of Occupational and Environmental Medicine Practice Guidelines Committee

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

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Timothy J. Key, MD, MPH, FACOEM, as Responsible Officer and ACOEM President Elect, and Edward A. Emmett, MD, MS, FACOEM, Chair of the ACOEM Council on Occupational and Environmental Medical Practice, contributed to the development of the guidelines as well.

## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

## **GUIDELINE STATUS**

This is the current release of the guideline.

This guideline updates a previous version: Harris, J, ed. Occupational Medicine Practice Guidelines: American College of Occupational and Environmental Medicine. Beverly Farms, MA: OEM Press; 1997.

## **GUIDELINE AVAILABILITY**

Print copies are available from ACOEM, 25 Northwest Point Boulevard, Suite 700, Elk Grove Village, IL 60007; Phone: 847-818-1800 x399. To order a subscription to the online version, call 800-441-9674 or visit <http://www.acoempracguides.org/>.

## **AVAILABILITY OF COMPANION DOCUMENTS**

None available

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI on May 31, 2006. The information was verified by the guideline developer on November 3, 2006.

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